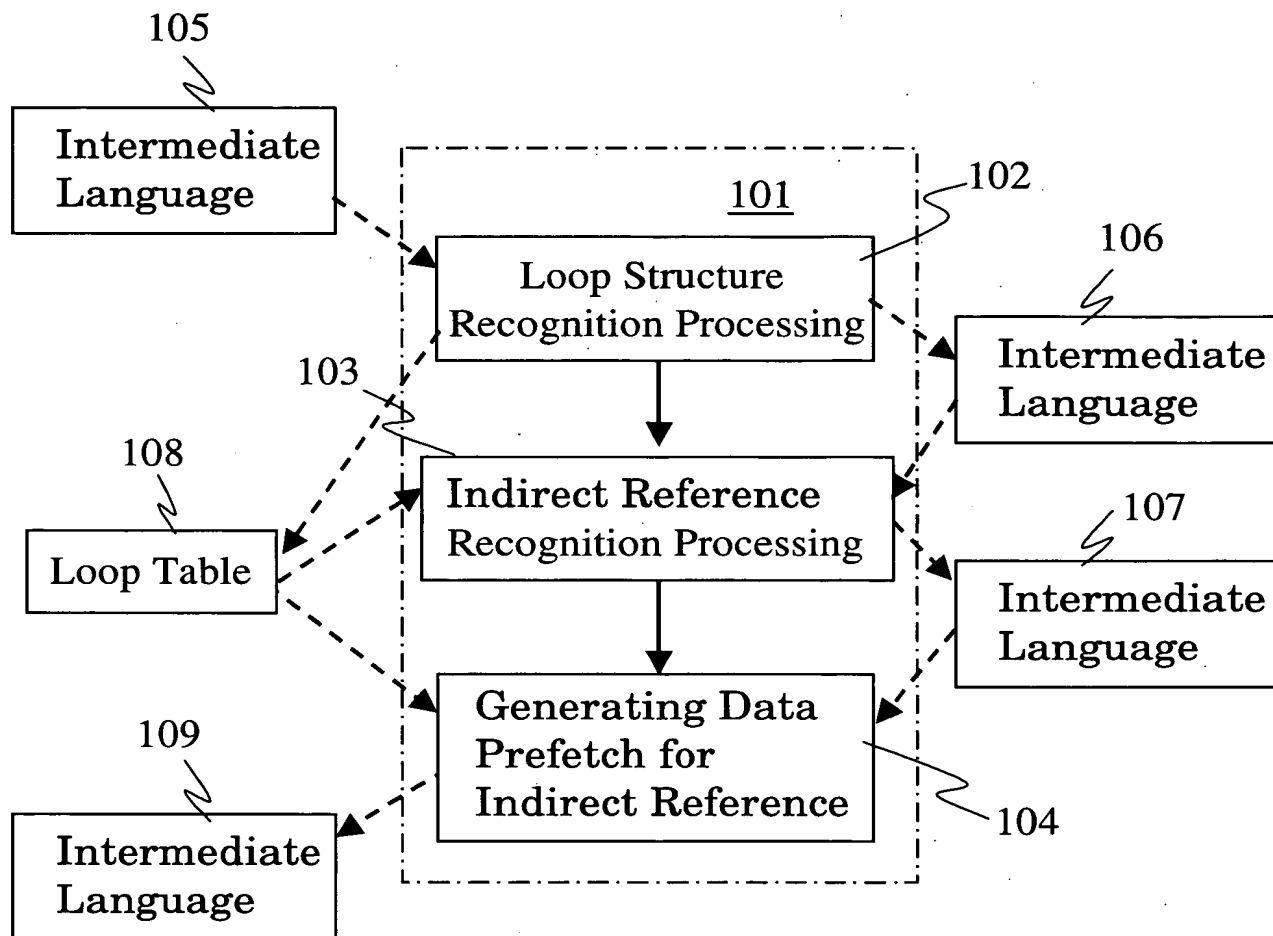




【FIG. 1】

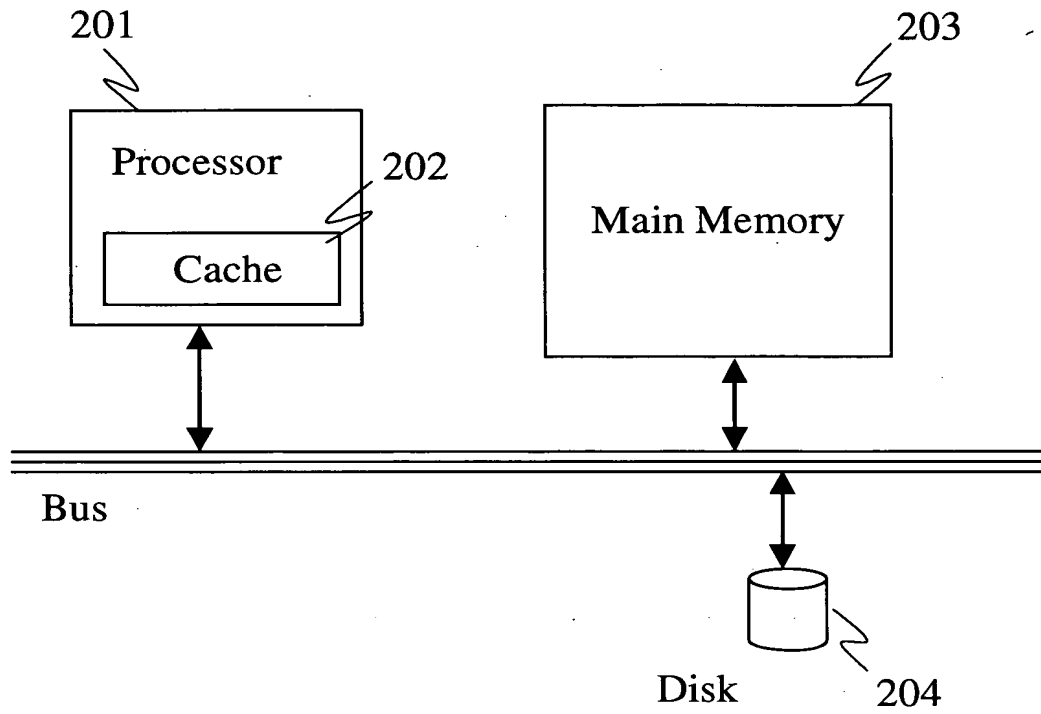
FIG. 1





【FIG. 2】

FIG. 2





【FIG. 3】

FIG. 3

(a)

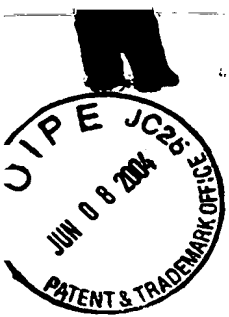
```
DO i=1,N
  s=s+A[L[i]]
END DO
```

(b)

```
DO i=1,N,4
  PREFETCH L[i+ $\alpha$ ]
  s=s+A[L[i]]
  s=s+A[L[i+1]]
  s=s+A[L[i+2]]
  s=s+A[L[i+3]]
END DO
```

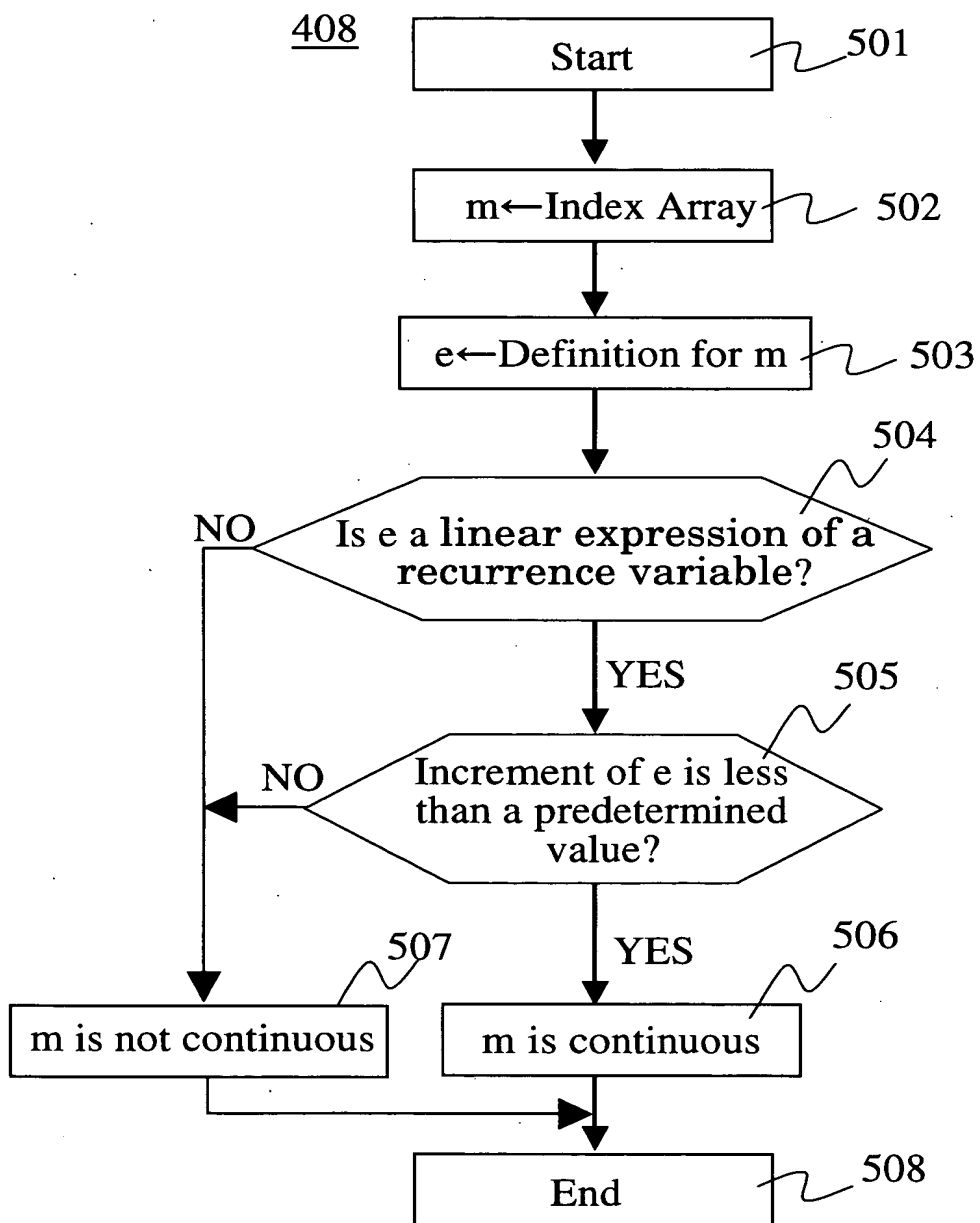
(c)

```
DO i=1,N,4
  PREFETCH L[i+2 $\alpha$ ]
  t0= L[i+ $\alpha$ ]
  PREFETCH A[t0]
  t1= L[i+1+ $\alpha$ ]
  PREFETCH A[t1]
  t2= L[i+2+ $\alpha$ ]
  PREFETCH A[t2]
  t3= L[i+3+ $\alpha$ ]
  PREFETCH A[t3]
  s=s+A[L[i]]
  s=s+A[L[i+1]]
  s=s+A[L[i+2]]
  s=s+A[L[i+3]]
END DO
```

【FIG. 5】

FIG. 5





【FIG. 6】

FIG. 6

-array_index L=2

【FIG. 7】

FIG. 7

```
*option increase(L,2)
DO i=1,N
  s=s+A[L[i]]
END DO
```

【FIG. 8】

FIG. 8

```
DO i=1,N
  L[i]=i*2
END DO
```

【FIG. 9】

FIG. 9

```
DO i=1,N,4
  PREFETCH L[i+ $\alpha$ ]
  t0=L[i+ $\alpha$ ]
  PREFETCH A[t0]
  s=s+A[L[i]]
  s=s+A[L[i+1]]
  s=s+A[L[i+2]]
  s=s+A[L[i+3]]
END DO
```